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# THE SCHOOL REVIEW

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## WASTE IN EDUCATIONAL CURRICULA<sup>1</sup>

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One of the marked facts in the educational history of the United States is the extraordinary growth in attendance on institutions of higher learning within the last few decades. The attendance in colleges, universities, and technical schools in 1889-90 was 55,687, and in 1908-9 it was 170,266—a gain of 206 per cent. The growth in population in the same period has been as follows: Population in 1889-90, 62,622,250; in 1909 (estimated), 90,161,309—a gain of 44 per cent. The increase in the attendance on educational institutions has outstripped the ratio of the increase of the population to a large extent.

May we infer from this very large gain in the attendance on schools of various grades that we have thereby a fair measure of progress in education? Are we getting results to correspond? Is there, in other words, a largely accelerated increase in the education and efficiency resulting therefrom throughout the country at large? In short, may we reasonably compare the effectiveness of our whole system of education with that, for instance, of Germany?

It is not my purpose today to discuss details, to any great extent, or to criticize particular forms of education, but rather to take a general survey of the whole field. As an association of

<sup>1</sup> Read at the meeting of the North Central Association of Colleges and Secondary Schools, Chicago, March 22, 1912.

secondary schools and colleges we are in a position to regard education as a continuous whole from the elementary school to the university, and perhaps in that way we can reach some judgments which at least will answer as a provisional basis for a scientific and detailed investigation. May we ask ourselves in the first place at what point in the educational scheme we find on the whole the most strenuous work on the part of students? I think few of us would doubt that we should find that especially in such schools as those of law, medicine, and technology, in every one of which there is an immediate professional purpose which gives definiteness to the ambition of those concerned. Perhaps to these may be added some college-preparatory schools in which in like manner there is the definite object of passing college-entrance examinations. In all these, in other words, the work of the student is directly related to an immediate end of his hopes and ambitions.

On the other hand, where in the entire scheme do we find noticeably a tendency to idling, accompanied by innumerable forms of social distraction? In other words, where do we find instructors casting about them for artificial stimuli to encourage the educational activity of students? Perhaps we should agree without doubt that we can find this particular spot in the usual secondary school and in the college. In fact, educational literature of late is filled with discussions of how to grapple with the very many puzzling forms which this problem assumes.

May we infer that the quality of the teaching profession is at fault? While of course no one claims that the profession is beyond criticism, and that it is not open to very large improvement, at the same time I think it will be admitted that the great body of those engaged in teaching are intelligent, are faithful to their duties, and are trying in every reasonable way to improve the methods with which they are doing their work, and to find still more definite aims. There is an increasing amount of professional training, and there is a much greater volume of careful study of existing conditions. I do not believe, therefore, that on the whole the quality of the profession can be regarded as responsible for such facts as may appear in derogation of getting the best results from certain forms of our educational organization.

Perhaps we can find some light as to our problem if we take up a specific question, regarding that as somewhat typical. Some studies have been made of the age at which students trained for medical practice finally reach their profession. At a late meeting of the Council on Medical Education the president of that council, Dr. Arthur Dean Bevan of Chicago, stated that medical candidates at the Western Reserve University in June, 1912, will have an average age of 27.9 years; Harvard, 27.2; Rush Medical College, in affiliation with the University of Chicago, 27; the University of California, 27; Johns Hopkins University, 26.4; and Cornell University, 26.4. It will be remembered that at the Johns Hopkins and at Harvard and at Western Reserve the four-year medical course follows a four-year college course, making a total of eight years, from which it is fairly to be inferred that the students on the average must have been between 19 and 20 on entering college. At Rush Medical College the total course, including the college course, is six years, from which it should be inferred that the medical candidates must have been upward of 20 on the average on entering college. Of course when a year or more of the hospital-interne work is added it will appear that the average age of students from the above institutions when they reach actual practice will be between 28 and 29 years. On the other hand, in England the average age of the young practitioner entering on his profession is from 25 to 26, and in Germany also from 25 to 26 years. There is thus in these two countries a discrepancy somewhere of about three years, and surely it can hardly be claimed that on the whole the medical candidates in this country are superior in their training to those in Germany. Where is the discrepancy found?

The average age at graduation from the German *Gymnasium* is about 19. It will be seen that, entering the university at that age and beginning immediately with the medical work, as is the case in Germany, the student can complete his medical course, and complete a course as interne in a hospital, and still be ready for practice as above noted at the age of 25 or 26. The *Gymnasium* course is on the whole practically equivalent, in its content at least, to a course in one of our high schools, together with the first two years in our colleges. The average age of those receiving the

Bachelor's degree at the University of Chicago in June, 1911, was 23.78. It happened, incidentally, that among the two hundred graduates in question exactly one hundred were men and one hundred were women. The average age of the men was 23.59 years, and of the women was 23.97 years, giving the average above noted of 23.78. Of course this means that the average young man who took his Bachelor's degree was about 19½ years old at the time he entered college, being thus rather more than two years back of the graduate of the German *Gymnasium*. Of course these averages include all candidates for the Bachelor's degree, of whom only a modicum were medical students, and from the facts as above adduced it appears that the average age of the medical students was somewhat higher than the average age of all the Bachelors in question.

Now where occurs this loss of time? In point of fact the testimony of most medical men is clear that it is desirable for students to be younger when they enter on their medical studies as their minds are more flexible. Moreover, it is, as was said, fairly plain that the German training certainly is by no means inferior to that in this country, at least. It seems therefore that somewhere in our system there is a wastage of at least two years, and possibly more. Where does this wastage occur? Is it found in the organization of our educational system, or is it found in the rate at which our younger students progress in their education?

I am inclined to believe that there is no serious difficulty in pointing out the wastage so far as the organization of the system is concerned. In the first place, the elementary school as usually organized implies eight grades, extending from the sixth year. Of course there are variations in different places. I do not believe that eight grades are necessary. At most this work should be done in seven years, and I think myself it could be done in six years. We do altogether too much teaching at that age. The primary requirement for a child in those years is that he be a healthy, happy, busy little animal. He should learn some things which he can use in the way of reading and writing and number-work and the use of his hands in various ways, and in observation. At the same time the main thing in those years is not the content of knowledge, and

I believe that the long duration of the school year fags the child so that there is an intellectual loss in the weariness of the constant schooling. We must remember that education is by no means all the result of schooling. The child gets education at home and in his total environment. Moreover, his mind is maturing and getting added powers by the mere process of growth, and the schooling is one, therefore, among many factors. Let the child escape from us teachers a reasonable amount of time during those years, and I believe we should get just as good results at an earlier age.

In the second place, if we study high-school and college catalogues we shall notice that in point of fact the colleges in their first year and in a part of their second year, so far as the content of the instruction goes, are doing precisely the same things that are done in the high schools. To all intents and purposes, therefore, the work is a duplication. There is an overlapping of work and a waste of time. Of course the students are older in the college than they were a year or two before in the high school, and, being older, perhaps they can do the work in a different way and possibly a little better; but then, so far as that goes, it is true at any point in the total curriculum, and I cannot see the advantage of this utter wastage of time. If the work of the secondary school is properly done—and if not properly done it ought to be and can be—when the student finishes with the secondary school he ought to be ready for the university; and by that I mean not for a Freshman class in a college but for the Junior class in the college, which is the beginning of real university work. All the preliminary work which covers the latter part of the high-school and the first part of the college course ought to be finished at that time, and the student able to enter specifically and definitely on a given course, continuing it with accurate methods and with a definite accurate purpose.

Now if it is possible to organize the work through the entire curriculum, the saving in the elementary school and the saving in the mal-adjustment before the secondary school and college would rescue just the two years that we need to be able to carry the student through as is done in Germany. Here then would seem to be the point of attack for an adequate study of the situation.

At this rate it will be seen that the student should, if he enters

college as it is now organized, be not more than 16 years, or at most 17 years, of age; should enter the university ready for professional work in medicine, law, or what not at the age of 18 or 19 years. My own belief is that in every case the earlier age is entirely practicable, but even conceding the other age we should still have a considerable saving.

Considering the other question of the coherent efficiency of the work of the entire curriculum, we are confronted with these facts: The student passes from school to school, falling into the hands of a different set of teachers with different ideas and ideals, but as a rule, so far as my observation goes, possessed with a uniform conviction that the work of preparation in the school immediately below is altogether inadequate, and therefore that much of it must be duplicated. I have noticed this in certain high schools, where it seems that the graduate from the grades comes to the high school improperly trained. I notice it each year in colleges, where the college teachers complain that the high-school training is not adequate for their purposes. In fact, I remember very well a number of years ago that what was then called a grammar school, which would cover about the second half of our present grades, had the same complaint of the work done in the first four grades. Poor little tots who had come from the grades and the three or four elementary years came up to this grammar school and were not properly trained. I wonder how many of us remember Thomas Nast's cartoon illustrating the Tweed Ring in New York in 1870. The picture showed all the thieving city officials standing in a circle, and each man was pointing his thumb over his shoulder at the man behind him. Nobody was responsible himself; it was always the other fellow who did it. Now I sometimes have thought that we teachers, although of course entertaining no criminal intentions, in practice are somewhat in the position of the gentlemen in Nast's cartoon: it is the other fellow who did it. We are doing our part as well as it can be done, and if only the other fellow would do his part we should get so much better results.

Another difficulty perhaps can be found in the very natural evolution of the secondary school in the direction of specialization. Instead of one teacher being responsible for all the work or the most

of the work of a student of a given age, he passes from the hands of a professor of Latin into the hands of a professor of geography, and thence into the hands of a professor of English, and so into the hands of a professor of mathematics, and so on *ad infinitum*. Each one naturally magnifies his calling, and is sure that he must have just as much of a student's time as he can get. None of them can have in mind the totality of the pupil's work, and the proper adjustment and relativity of the various subject-matters of instruction. In other words, they are seeking to make the pupil a Latinist, a mathematician, a geographer, and what not, instead of seeking the balance and rounded training to which each child is entitled.

Again, there have been innumerable additions in our schools in the last generation in respect to the subject-matter of instruction. The field of human knowledge is constantly increasing, and we feel that our schools ought to reflect that vast field. It seems a fair question whether the tendency of this is not to try to spread over a curriculum too many small fragments of many things, whereby the pupil loses in the coherence of a definite plan of study and finds substituted a very great number of small fragments of things. It does seem to me that we should get more educational values out of fewer things, taught for a longer time, and with more effective drill and repetition.

Again, I am wondering whether we are getting out of some of our subject-matter all the values for which we hoped. May I illustrate, for instance, by such a subject as that of English? As we know, a generation or so ago the English in the secondary school consisted in the main of grammar and rhetoric, and possibly a little in the way of the history of English literature, with now and then readings from some selected authors. That has been expanded into a rich English curriculum, in which a great deal of work is done in writing and in the study of specific authors. We have in our schools a large English faculty, consisting of well-trained instructors and eager teachers who are trying faithfully to accomplish very definite results. These results, I suppose, are to train the student to speak and write English well, to become familiar with the best literature, and above all to become fond of the best literature. I don't feel at all sure that we are getting those results. I don't notice that



students entering college write, so far as I can see, perceptibly better English than those who entered college a generation ago, before all this work was done. I don't notice that their grasp of English literature, and especially their love for good literature, is very much better, if any, than it was then. Now of course in saying this I admit frankly that I speak not on the basis of an extensive and scientific study of the situation, but simply on the basis of what has come repeatedly under my observation. I am wondering whether the efforts of our teachers to get their pupils to write good English is not in part counteracted and nullified by the incessant note-taking and scrappy writing done by the same pupils in other departments. In the English department they are taught to write in a certain way to secure good form, and then they go into a geography or history lesson, take rapid notes, and write rapid papers which may contain the subject-matter of knowledge in those departments but presented in very slovenly English because they have no time to do the thing as it should be. Therefore what we are putting into the pocket with one hand perhaps we are taking out with the other. I cannot forget how one of the noblest poems written by an American author was ruined for me completely by my being obliged to parse it. All the glory and beauty of the poetry evaporated, and there remained a delicately articulated skeleton. I don't know whether this is typical or not, but judging by the kind of reading done by most of our young college students I simply raise the question whether we have got so far as we hoped we were going to get when we entered on this very extensive program of instruction in English.

Now these points are suggestive. I am not recommending a specific plan, although of course it would be easy for any of us to do something of that sort. My own estimate would be that a better organization than the one at present would be an elementary school of six years, the main purpose being not primarily the acquisition of knowledge; followed by an intermediate school of three years from the ages, say, of 12 to 15, in which the child ought to learn how to use his mind to acquire some specific knowledge; and then perhaps what we might call in the absence of a better name a collegiate school of three years more, in which the student might

finish his preparation either for business life or for the university. This would, as you see, take off one grade from the eight absolutely; and would take off the last grade of the remaining seven and combine that with the first two of the present secondary school; and would condense the remaining two of the secondary school with the first of the ordinary college into the work of three years: thus making the student ready for the university proper at the age of about 18, or, if you like, 19.

Further, I am inclined to think that our grading is not sufficiently exacting. In other words, that too many are promoted *en masse*. We ought to sift those who are admitted to each grade of the schools from the one below with progressive sharpness, so that the burden of proof should be on a student to prove his right to pass from the elementary to the intermediate school, to pass from the intermediate to the collegiate school, and still more to pass from the collegiate school to the university. That is to say, it should be progressively more difficult to secure promotion. In this way I fancy we could get greater efficiency from our instruction.

You will notice that these matters as to reorganization are by no means the presentation of a definitely formulated plan, but are merely a suggestion as to what perhaps is worthy of consideration and investigation. Many plans may be formed, any one of which may be better than the one herein suggested. The main thing I have in mind is to answer these questions: Can we not in our educational system save at least two years which seem now to go to waste owing to the needless protraction of schooling and the needless duplications? Can we not make our work more effective by giving it greater coherence throughout? Can we not study the subject-matter of our instruction in various things with a view of ascertaining whether on the whole we are getting the results which we ought to get? In other words, if a student of secondary-school age has been studying French two or three years why should not the student be able to use that French effectively as a means of conversation and sight reading? Why may not the same thing apply to Latin? Why may not the same thing apply to any branch of knowledge which we try to impart? Are we getting this form of result?